

CS286-Computer Organization & Architecture

Quiz Question List (Quiz #2)

for August 31st, 2026

The following is a list of possible questions for our quiz on August 31st. Some of the questions will not be asked in the quiz. All the questions that will appear in the quiz will appear exactly as shown below (however, numeric parameters may be changed). The quiz is closed textbook, closed notes and closed neighbors. Note that the questions, which did not appear in this quiz, still may appear in the exams. You will find a solution for these questions during lectures.

- #1: What does “sufficient condition” guarantee?
- #2: If a sufficient condition is not satisfied, what conclusion can we draw?
- #3: What does “necessary condition” guarantee?
- #4: If a necessary condition is satisfied, what conclusion can we draw?
- #5: What are the **three** primary advantages of learning “computer organization and architecture” by CS majors?
- #6: What does “efficient” in “efficient computer programs” mean? Mention at least two.
- #7: What is “Moore’s Law” (a specific definition of “Moore’s Law” is needed)?
- #8: What does “MIPS” stand for?
- #9: What are “super computers” (how fast, what purpose and how large)?
- #10: What is “Von-Neumann Architecture”? (Your HW – our textbook or some search engines in the Internet)
- #11: What does “high-level” in “high-level programming languages” mean?
- #12: What does “low-level” in “low-level programming languages” mean?
- #13: Mention typical hardware components in a computer system (at least five examples).
- #14: Mention the three different groups of software in a computer system.
- #15: What does “performance” in computer system mean (at least four examples)?

- #16:** Where executable programs exist (before they are executed by a processor) in a computer system)?
- #17:** What are the three different types of “program files”? Which format do processors understand?
- #18:** What are the languages used in (human) programmers’ source code files?
- #19:** What are the languages used in assembly source code files?
- #20:** What are the languages used in binary executable files?
- #21:** What is the primary purpose of “(human) high-level programmers’ source code files”?
- #22:** How will “programmers’ life” be easier if programmers develop programs using high-level programming languages? Mention at least three different ways.
- #23:** What is the primary purpose of “binary executable files”?
- #24:** What is the primary purpose of “assembly source code files”?
- #25:** What is the software tool that translates “(human) programmers’ source code files” into “assembly source code files”?
- #26:** What is the software tool that translates “assembly source code files” into “binary executable files”?
- #27:** What is the relation between “statements” in high-level programming languages and “instructions” in assembly languages? Select the best option that represents their relation in the following options.
- (a) one (statement)-to-one (instruction)
 - (b) one (statement)-to-many (instructions)
 - (c) many (statements) to-one (instruction)
 - (d) many (statements)-to-many (instructions)
 - (e) none of the above

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#28: What is the relation between “instructions” in assembly languages and “machine codes”? Select the best option that represents their relation in the following options.

- (a) one (instruction)-to-one (machine code)
- (b) one (instruction)-to-many (machine codes)
- (c) many (instructions) to-one (machine code)
- (d) many (instructions)-to-many (machine codes)
- (e) none of the above